

Extension Courses of the Artillery School

Following is a complete list of subcourses to be administered at The Artillery School. To insure that Extension Courses of The Artillery School present the latest trends in Artillery Tactics and Techniques, the preparation of several branch material subcourses has been delayed. The subcourses printed and probable printing dates for other subcourses are shown in Appendix I.

Any officer may apply for any particular subcourse needed in furtherance of his military education. However, to obtain a Certificate of Completion certain subcourses in a series must be completed satisfactorily.

Subcourses required for the award of Certificates of Completion in field artillery, antiaircraft artillery, and seacoast artillery subjects are shown in Appendix II.

20 SERIES

20-1 Map and Aerial Photograph Reading—II. Review of scale, distance, location, direction, elevation, profiles, intervisibility, logical contouring, stream and ridge lining, intersection, resection, aerial photographs, to include point designation grid, orientation, basic military identification, stereovision, and photos as map substitutes. *Texts:* FM 21-25, C1; FM 21-26.

20-2 Methods of Instruction. Responsibility; preparation to include methods, how to find source material, lesson plans, presentation, application, examination, discussion and critique; programs and schedules. *Texts:* TM 21-250, C1.

20-3 Military Law—Courts-Martial. Classification, composition, and appointment of courts-martial; jurisdiction of courts-martial as to persons and offenses; disciplinary power of the commanding officer under AW 104; procedure before trial by courts-martial including handling of charges, time accused is in confinement, duties of provost marshal and criminal investigation department; courts-martial procedure. *Texts:* TM 27-255; MCM 1928.

20-4 Mess Management. Importance of efficient mess operation; mess organization and duties of personnel; messing equipment; ration distribution; inspection and storage of subsistence; nutrition and menu planning, food preparation and conservation; sanitation; mess inspections, records. *Texts:* TM 10-205, C1; TM 10-45.

20-5 Motor Vehicles; Operation and Maintenance. Responsibility for operation, echelons of maintenance, duties of maintenance officers, rules of the road, signals. *Texts:* TM 21-305, C1; TM 37-2810.

20-6 Artillery Materiel and Ammunition. The basic characteristics, description, care, and maintenance of automatic weapons, rocket launchers, guns and howitzers; care, handling (safety), uses, and characteristics of artillery ammunition. *Texts:* FM 9-6, C1; TM 4-205, C1, 2; TM 4-210, TM 9-331, C1; TM 9-350, TM 9-392, TM 9-757, TM 9-1901, TM 9-372, C2.

20-7 Principles of Infantry Tactics—I. Organization and tactics of the infantry rifle and heavy weapons company, positions, and functions of forward observers. *Texts:* FM 7-10, C1, 2; FM 7-15, C1, 2, 3; FM 6-135, FM 17-30, FM 17-36.

20-8 Basic Artillery Gunnery. Elementary ballistics and dispersion as applied to the conduct of artillery fire; principles of conduct of fire and preparation of firing data. *Texts:* FM 4-10, C1; FM 4-110, C1; FM 6-40, C1, 2; FM 44-11, FT 105-H-3, C8, 9, 10.

20-9 Basic Artillery Communication. Communication means; wire and radio communication, voice radio procedure, message writing, message center operation, communication security, signal supply and

maintenance, communication systems for FA, AAA, and SCA battalions. *Texts:* FM 6-101, FM 7-24, C1; FM 24-17, C1; FM 24-20, C1; CCBP 3-2, C1; TM 11-469.

20-10 Basic Electricity. Electrical fundamentals including definitions, Ohm's Law, batteries, DC circuits, magnetic phenomena, AC inductance, capacitance, impedance, meters, and measurements. *Texts:* TM 1-455.

20-11 Recognition of Artillery Targets. Principles of target recognition, characteristics of standard artillery targets to include land, sea, and air; methods of recognition, and recognition training. *Texts:* FM 21-80.

20-12FA Firing Battery. Organization; duties of individuals in preparation for firing; control of fire at the battery position. *Texts:* FM 6-40, C1, 2; FM 6-140, FT 105-H-3, C8, 9, 10.

20-13FA Conduct of Observed Fire—I. Range-bracketing procedure and time fire. *Texts:* FM 6-40, C1, 2; FT 105-H-3, C8, 9, 10.

20-14FA Conduct of Observed Fire—II. Deflection-bracketing procedure. *Texts:* FM 6-40, C1, 2; FT 105-H-3, C8, 9, 10.

20-15AAAAA Materiel—Guns. Characteristics and description of AAA guns, description and functioning of gun and mount. *Texts:* TM 9-372, C1.

20-16AAAAA Materiel—Automatic Weapons. Characteristics and description of AAA automatic weapons, description and functioning of gun and mount. *Texts:* TM 9-223, TM 9-252, C1; TM 9-757.

20-17AAAAA Basic Gunnery. Elements of data, methods of position finding and speed prediction, differential effects, AAA firing tables and trajectory charts, M1 slide rule, solution of triangles. *Texts:* FM 4-110, C1; FM 44-11.

20-18SC Seacoast Artillery Materiel. Care, maintenance and functioning of seacoast material including power plants; submarine mines; data computers, and transmission systems; demolitions. *Texts:* FM 4-7, FM 4-15, C1, 2; FM 4-30, FM 4-32, C1; FM 44-38, TM 9-669.

20-19SC Seacoast Artillery Fire Control and Position-Finding Systems. Principles of position-finding systems, timing, plotting boards and deflection board M1, range correction devices, vertical-base systems and instruments, stereoscopic range finder, radar position-finding systems, gun data computers. *Texts:* FM 4-15, C1, 2; TM 44-250.

20-20SC Seacoast Artillery Gunnery — I. Seacoast Artillery firing tables, problems relating to positions, spotting, pointing, landward firing for fixed seacoast artillery. *Texts:* FM 4-10, C1; FT 155-S-2, C7, 8, 9.

20-21FA Air Navigation (For FA pilots only). Principles of navigation applicable to light aviation. *Texts:* TM 1-205, C1.

LEGEND

Subcourses are either common, or common artillery, subjects unless the subcourse number is followed by letters indicating otherwise.

FA — Indicates Field Artillery subjects

AAA—Indicates Antiaircraft Artillery subjects

SC—Indicates Seacoast Artillery subjects

30 SERIES

30-1 Administration—II. Administration of the company to include correspondence and records. *Texts:* TM 12-253, C1, 2; TM 12-256, C1, 2; TM 14-502, C1, 2, 3; TM 20-221; AR's 210-50, 345-5, 345-25, 345-400, 345-415, 600-550, 600-115, 615-5, 615-200, 615,300, 615-360.

30-2 Training Management. Estimate of the training situation, directives, programs, schedules, preparation of field exercises, supervision of training. *Texts:* FM 21-5, TM 21-250, C1.

30-3 Terrain Evaluation. Influence of corridors and cross compartments in determining boundaries, aids to the study of terrain and determination of key terrain features, tactical study of terrain with emphasis upon artillery operations; special problems applicable to FA, AAA, and SCA. *Texts:* Special Texts.

30-4 Artillery Survey. The use of survey equipment, basic survey equipment, basic survey operations; establishing and extending survey control (including astronomical orientation); survey computations; survey plans and procedures. *Texts:* FM 6-40, C1, 2; TM 6-240, TM 20-230, Errata Sheet.

30-5 Principles of Infantry Tactics—II. Organization and tactical employment of the infantry battalion to include advance guard, attack, defense, outpost; cooperation with tanks, functions of the artillery liaison officer and forward observers. *Texts:* FM 7-20, FM 6-101, FM 6-135.

30-6 Hasty Field Fortifications and Obstacles. Mines and booby traps, entrenchments and emplacements, obstacles, camouflage, clearing, dummy works, technique of constructing field fortifications appropriate to the tactical situation. *Texts:* FM 5-15, FM 5-20, FM 5-31, C1 to 18 incl; Attached Memoranda, for special needs of AAA and SCA.

30-7 Troop Movements and Bivouac. Movement of an artillery battalion and battery overland and by rail; plans, reconnaissance, orders, march rates, and time and space factors; organization of the march column and antiaircraft protection; reconnaissance and procedure for movement into and out of bivouac. *Texts:* FM 6-105, FM 25-10, C1, 2, 3; TM 9-2854.

30-8 Artillery Intelligence. Sources of intelligence; employment of intelligence agencies; counterintelligence measures; collection, evaluation, interpretation, and dissemination of information. *Texts:* FM 6-130, FM 30-5, FM 448.

30-9 AAA Tactics—General. General organization and missions of AAA; characteristics of weapons, control of fire, use of screening smoke; employment in rear areas, in combat zone, and against land and naval targets; AAA defense plan; communications. *Texts:* FM 4-100, FM 3-50, C1; FM 44-8.

30-10FA Field Artillery Signal Communications. Duties of communication personnel; division artillery and FA regimental communication systems; communication systems in displacements, in the attack, and in the defense. *Texts:* FM 7-24, C1; FM 6-101, FM 24-17, C1; TM 6-605.

30-11FA Fire-Direction Procedure—I. Map data, determination and application of corrections. *Texts:* FM 6-40, C1, 2; TM 9-524, TM 20-230, Errata Sheet; FT 105-H-3, C8, 9, 10.

30-12FA Map and Aerial Photograph Reading for Field Artillery. Advanced study of aerial photographs and photomaps with special emphasis upon field artillery use. *Texts:* FM 6-40, C1, 2; FM 21-26, TM 5-230.

30-13FA Conduct of Observed Fire—III. Miscellaneous observed fires. *Texts:* FM 6-40, C1, 2; TM 9-524, FT 105-H-3, C8, 9, 10.

30-14FA Fire-Direction Procedure—II. Observed fire charts, fire-direction center procedure. *Texts:* FM 6-40, C1, 2; FT 105-H-3, C8, 9, 10.

30-15AAA Electronics. Introduction to radio fundamentals, resonant circuits, vacuum tubes, rectifiers, filter circuits, amplifiers and oscillators. *Texts:* TM 11-455; TM 11-466.

30-16AAA Employment of AAA Radar. Characteristics and capabilities of radar, principles of sighting and operation, cabling and associated equipment, operation and checks, maintenance responsibilities, jamming and countermeasures, IFF equipment. *Texts:* FM 44-45, FM 4-144, C1, 2.

30-17AAA Fire Control—AAA Guns. Description, emplacement, checks and adjustments, operation, maintenance of AAA directors and allied power plants and cabling systems, orientation and synchronization of the AAA battery. *Texts:* FM 44-38, TM 9-671, C1.

30-18AAA Advanced Gunnery—AAA Guns. Classes and types of fire; O₁, O₂, O₃ data; computation of ballistic corrections; computation of firing data; application of corrections; trial fire to include radar spotting; calibration fire; computation and application of trial fire and calibration fire corrections; verification fire; terrestrial fire. *Texts:* FM 4-110, C1; FT 90-AA-B-3, C4, 5, 6; FT 4.7-AA-C1, C2.

30-19AAA AAA Advanced Gunnery and Fire Control, Automatic Weapons. Slant plane gunnery; tracer information; synchronization, orientation, and operation of fire-control equipment; trial fire; terrestrial fire. *Texts:* FM 44-11, FM 44-51.

30-20SC Employment of Seacoast Radar. Characteristics and capabilities of radar, principles governing the location, operation, and employment of radar sets

in surveillance and fire control; cabling and associated equipment, maintenance, jamming, and countermeasures. *Texts:* TM 11-467, TM 11-1324, TM 11-1366; C1; CATB.

30-21SC Seacoast Artillery Communication. Fixed SCA fire-control communication system, cable installations, time-interval systems, switchboards, mobile seacoast artillery fire-control equipment and systems, signal orders, SOI, duties of communication personnel. *Texts:* FM 24-16, FM 24-17, C1; WD TC No 43 (As Atchd Memo).

30-22SC Orientation for Seacoast Artillery. Elementary astronomy, approximate azimuth and determination, stellar observation, solar observation. *Texts:* TM 44-225, C1, 2; The 1947 American Nautical Almanac.

30-23SC Seacoast Artillery Gunnery—II. Errors and probability; dispersion; calibration; adjustment of fire to include magnitude, bracketing and ladder methods; lateral adjustment, adjustment methods for anti-motor-torpedo-boat batteries. *Texts:* FM 4-10, C1; FM 4-15, C1, 2; FT 6-C-2, FT 155-S-2, C7, 8, 9; FT 16-E-1.

30-24SC Preparation and Conduct of Fire; Records. Preparation for firing; safety precautions; commands; range section drill procedures; gun section drill procedures; reports, records, and forms. *Texts:* FM 4-15, C1, 2; FM 4-20, C1, 2; FM 4-86, C1; TM 4-245.

30-25SC Elementary Tactics for Seacoast Artillery. Mission of Seacoast Artillery, naval targets and effect of SCA thereon, tactical employment of harbor defense, tactical employment of mobile SCA, tactical employment of surveillance aids, intelligence, security, commands and orders, supply and evacuation, organization of small harbor defense. *Texts:* FM4-5.

30-26FA FA Meteorology (For FA Obsn officers only). Mission, organization, and employment of the ballistic meteorologic station in a field artillery observation battalion; theory of the metro messages for ar-artillery and sound ranging; visual methods, equipment, and data; radio direction finder, equipment, and data; radiosonde equipment and data; plotting, computations, and evaluation of records necessary to obtain metro message for field artillery and sound ranging. *Texts:* FM 6-120, TM 20-240.

30-27FA Meteorology for Light Aviation (For pilots only). Principles of meteorology applicable to light aviation. *Texts:* TM 1-230.

30-28AAA Flak Analysis (Elective). Employment and preparation of flak computer for graphical analysis of AAA gun defenses; uses of flak computers; measures for avoiding flak damage. *Texts:* TM 4-260.

30-29AAA Statistical Research and Analysis (Elective). Basic principles of statistical analysis as used in preparation and evaluation studies and as used in gun and automatic weapons research. *Texts:* None approved.

40 SERIES

40-1 Map and Aerial Photograph Reading—III. Review of basic and intermediate map reading; types, grids, scales, and additional applications to foreign maps; review of aerial photograph reading, photo interpretation. *Texts:* FM 21-26, FM 30-21.

40-2 Rules of Land Warfare. Principles of land warfare including status of persons, conduct of hostilities, etc. *Texts:* FM 27-10, C1.

40-3 Military Government. Military government procedure. *Texts:* FM 27-5.

40-4 Combat Intelligence—III. Intelligence and counterintelligence agencies in the division; functions of G-2 including coordination with other staff members; G-2 records and reports; G-2 plan; G-2 estimates; G-2 annex; terrain studies; employment, use, and administration of special teams; counterintelligence to include security, secrecy, discipline, deceptive measures, prevention of sabotage and espionage, screening road movements of personnel. *Texts:* FM 30-5, FM 30-15, FM 30-25, C1, 2; FM 30-21.

40-5 Employment of Guided Missiles. Development of guided missiles warfare, principles of guided missiles warfare; capabilities and limitations of guided missiles, and their use and effectiveness. *Texts:* Attached Memoranda.

40-6 Principles of Infantry Tactics—III. Organization of the infantry regiment; the infantry regiment on the march, approach march, attack and defense; joint planning of fires by infantry commanders, field artillery battalion commanders, artillery liaison officers, and forward observers. *Texts:* FM 7-40, C1, 2; FM 6-101, FM 6-135.

40-7 Staff Functions. Organization and functions of the staff of an artillery battalion, command post operations, staff records, reports. *Texts:* FM 6-40, C1, 2; FM 6-101, FM 101-5, C1 to 4 and 6 to 10 incl.

40-8 Operation Orders. Types of orders, technique of preparation, artillery battalion and battery orders. *Texts:* FM 6-20, FM 101-5, C1 to 4 and 6 to 10 incl.

40-9 Supply in Combat. Definitions, organization for supply, duties of S-4 in combat to include procurement methods and procedure, ammunition supply. *Texts:* FM 6-101, FM 100-10, C1, 2, 3; FM 101-5, C1 to 4 and 6 to 10 incl.

40-10 Field Artillery Tactics, General. Organization of division artillery and higher echelons, artillery terms; characteristics of field artillery, principles of field artillery tactics, types of artillery fire, methods of employment. *Texts:* FM 6-20, FM 6-40, C1, 2; FM 6-101, FM 6-105, FM 6-130.

40-11 RSOP. Principles governing the reconnaissance, selection, and occupation of position by a FA, AAA, and SCA battalion; organization of position including camouflage and local defense. *Texts:* FM 4-5, FM 4-100, FM 6-20, FM 6-101, FM 6-105.

40-12FA Self-Propelled Artillery. Organization, capabilities, and limitations of self-propelled artillery; artillery support of armor; control of tanks in reinforcing artillery roles. *Texts:* FM 6-76, FM 6-82, FM 6-105.

40-13FA FA in Offensive Action. Employment of light and medium artillery battalions in offensive action, including meeting engagement, attack of a position, and pursuit. *Texts:* FM 6-20, FM 6-101.

40-14FA FA in Defensive Action. Employment of the field artillery battalions of a division in defense, retrograde movements, and countereffensive. *Texts:* FM 6-20, FM 6-101.

40-15FA Employment of Light Aviation—Ground Units. Tactics and technique of employment of ground forces light aviation. *Texts:* FM 20-100.

40-16AAAAAA Gun Battalion. Organization, administrative and tactical functions, protection of an objective, relationship of the battalion to its batteries and to higher echelons. *Texts:* FM 4-100, FM 44-4, FM 101-5, C1 to 4 and 6 to 10 incl.; FM 101-10.

40-17AAAAAA Automatic Weapons Battalion. Organization, administration and tactical functions, tactical employment, relationship of the battalion to its batteries and to higher echelons. *Texts:* FM 4-100, FM 44-2.

40-18AAAAAA in Ground Support. AAA tactics and technique in a ground support role; gunnery, sporting, and fire adjustment procedures; siting of guns and automatic weapons for direct and indirect laying; command and coordination channels to include operation of the FDC; use against naval vessels. *Texts:* FM 4-110, C1; FM 4-121, C1; FM 6-40, C1, 2; FM 44-11, FM 44-51.

40-19AAAAWS, AAIS, and AAOR. Organization, functions, principles and operation of the warning system of AAA; sources of information, manner and form of dissemination. *Texts:* FM 44-8.

40-20SC Seacoast Artillery Alternate Methods of Fire Control. Principles of alternate methods of fire control, one-station fire-control system, central system, gun commander's control, stand-by fire control for 90-mm guns, air observation of fire. *Texts:* FM 4-10, C1.

40-21SC Target Practice Analysis. Drill and drill analysis, conduct of seaward practice, analysis of service practice and reports, problems. *Texts:* TM 4-235, C1.

40-22SC Tactics and Technique of Controlled Submarine Mines. Organization of mine command; establishment of mine defense; protection of mine fields, mine materiel, installations, and mine flotilla; preparation for mine planting, planting and maintenance of a mine field; operation of a controlled submarine defense; conduct of mine target practice, underwater detection. *Texts:* FM 4-7, TM 4-235, C1.

40-23SC Searchlights. Organization; materiel; employment. *Texts:* FM 4-29.

40-24FA Sound and Flash Ranging (For FA Obsn officers only). Missions, organization, and tactical employment of the field artillery observation battalion; survey principles for corps artillery; sound and flash ranging; theory and principles of sound and flash ranging. *Texts:* FM 6-120.

50 SERIES

50-1FA Division Artillery in Offensive Action. General principles of offensive action with emphasis upon the artillery role; a continuing map exercise which illustrates all phases of the division artillery in offensive action to include operation orders, planning of fires and forward displacements. *Texts:* FM 6-20, FM 6-100, FM 6-101, FM 21-30, C1, 2, 3, FM 100-5, FM 101-5, C1 to 4 and 6 to 10 incl.

50-2FA Division Artillery in Defensive Action. General principles of defensive action with emphasis on the artillery role; a continuing map exercise which illustrates all phases of the division artillery in defensive action to include operation orders, occupation and organization of position, planning of defensive fires, and rearward displacements. *Texts:* FM 6-20, FM 6-100, FM 6-101, FM 21-30, C1, 2, 3, FM 100-5, FM 101-5, C1 to 4 and 6 to 10 incl.

50-3FA Corps and Army Artillery. Composition and employment of corps and army artillery to include firing plan and counterbattery functions of nondivisional artillery. *Texts:* FM 6-20, FM 6-100, FM 6-130.

50-4FA Artillery with the Corps in Offensive Action. Organization for combat and fire planning, including counterbattery for all artillery with the corps in the attack. *Texts:* FM 6-20, FM 6-101, FM 6-130.

50-5FA Artillery with the Corps in Defensive Action. Organization for combat and planning fires for defense and retrograde movement. *Texts:* FM 6-20, FM 100-5.

50-6AAA AAA Brigade, Group and their Staffs. Organization and operation of the group and brigade, their administration and tactical functions; joint and separate employment including appropriate assignments for each: operation with the field forces and with an air defense command. *Texts:* FM 4-100, FM 101-5, C1 to 4 and 6 to 10 incl.

50-7AAA AAA with Division, Corps, and Army. Administration and tactical functions in AAA in forward areas, relationship to supported units, priorities for defense, command and coordination, basis of allocation of antiaircraft units to the army and component units. *Texts:* FM 4-100, FM 44-2, FM 44-4.

50-8AAA AAA Target Practice Analysis. Instructions governing the conduct of AAA target practice, analysis of target practice, and target practice reports. *Texts:* TM 44-234.

50-9SC The Harbor Defense Command. The Harbor Defense project: organization, staff and staff duties, fort and group commanders; records; relation to adjacent forces. *Texts:* AR 90 40 C1; AR 90-50; FM 4-5, FM 101-5, C1 to 4 and 6 to 10 incl.; TM 4-245.

50-10SC Operations of CP's and Operation Rooms. Organization and operation of harbor defense group, battalion and battery command posts, and manning personnel and their duties; organization and operation of the harbor entrance control post. *Texts:* FM 4-5, FM 44-8.

50-11SC Tactics of Seacoast Artillery. Control and coordination of seacoast artillery; surveillance and illumination plans; coordination of fires; tactical problems in anti-motor-torpedo-boat defense; tactical employment of mobile artillery, and harbor defense; local security; destruction of materiel. *Texts:* FM 4-5, FM 30-5, FM 101-5, C1 to 4 and 6 to 10 incl.

50-12SC Seacoast Artillery Gunnery. A review of coast artillery gunnery to include theory of position finding, ballistics and firing tables, pointing, calibration, sporting errors, probability and dispersion, adjustment of fire. *Texts:* FM 4-10, C1; FM 4-15, C1, 2; FT 6-C-2, FT 155-S-2, C7, 8, 9; FT 16-E-1.

APPENDIX I—STATUS OF SUBCOURSES

Section I—Subcourses Printed

20-Series

- 20-1 Map and Aerial Photograph Reading—II
- 20-2 Methods of Instruction
- 20-3 Military Law—Courts Martial
- 20-4 Field Artillery Materiel (to become Common Artillery 20-6, upon revision)

30-Series

- 30-1 Administration—II
- 30-2 (FA) Training Management
- 30-2 (AAA) Training Management
- 30-2 (SC) Training Management
- 30-3 (FA) Terrain Evaluation (to become Common Artillery)
- 30-3 (AAA) Electronics (to become 30-15 AAA)
- 30-3 (SC) Terrain Evaluation (to become Common Artillery)
- 30-6 (FA) Combat Supply, Field Artillery Battalion (to be combined with 40-9, as Common Artillery, 40-9 upon revision)
- 30-27 (FA) Meteorology for Light Aviation

40-Series

- 40-1 Map and Aerial Photograph Reading—III
- 40-2 Rules of Land Warfare
- 40-7 (FA) Staff Functions (to become Common Artillery upon revision)

40-7 (SC) Tactics for Seacoast Artillery (to be combined with 50-1 (SC) as 50-11 (SC) upon revision)

40-9 (FA) Supply in Combat (to become Common Artillery upon revision)

50-Series

- 50-1 (FA) Division Artillery in Offensive Action
- 50-1 (SC) Tactics of Seacoast Artillery (to be combined with 40-7 (SC) as 50-11 (SC) upon revision)
- 50-2 (FA) Division Artillery in Defensive Action
- 50-3 (FA) Corps and Army Artillery

60-Series

60-1 (SC) Seacoast Artillery Gunnery (to become 50-12 (SC) upon revision)

Section II—Printing Prospectus

20 Series

- 20-7 Principles of Infantry Tactics—I 1 Nov 47
- 20-8 Basic Artillery Gunnery 15 Dec 47
- 20-10 Basic Electricity 15 Aug 47
- 20-12 Firing Battery 15 Aug 47
- 20-13 Conduct of Observed Fire—I 15 Nov 47
- 20-14 Conduct of Observed Fire—II 1 Dec 47

30-Series

- 30-3 (AAA) Terrain Evaluation 1 Aug 47
- 30-7 Troop Movements and Bivouac 15 Oct 47
- 30-11 (FA) Fire Direction Procedure—I 25 Aug 47

30-12 (FA) Map and Aerial Photograph Reading for Field Artillery	1 Aug 47	40-11 RSOP	1 Dec 47
30-18 (AAA) Advanced Gunnery—AAA Guns	15 Nov 47	40-15 Employment of Light Aviation—Ground Units	15 Sep 47
30-20 (SC) Employment of Seacoast Artillery Radar	15 Jul 47	40-24 (FA) Sound and Flash Ranging	20 Jul 47
40-Series		50-Series	
40-10 Field Artillery Tactics, General	1 Sep 47	50-6 (AAA) The AAA Brigade, Group and their Staffs	1 Aug 47

APPENDIX II—REQUIRED SUBCOURSES

Section I—Subcourses Required for Award of Certificate of Completion in Field Artillery Subjects

20-Series

- 20-1 Map and Aerial Photograph Reading—II
- 20-2 Methods of Instruction
- 20-3 Military Law—Courts Martial
- 20-4 Mess Management
- 20-5 Motor Vehicles; Operation and Maintenance
- 20-6 Artillery Materiel and Ammunition
- 20-7 Principles of Infantry Tactics—I
- 20-8 Basic Artillery Gunnery
- 20-9 Basic Artillery Communication
- 20-10 Basic Electricity
- 20-11 Recognition of Artillery Targets
- 20-12 (FA) Firing Battery
- 20-13 (FA) Conduct of Observed Fire—I
- 20-14 (FA) Conduct of Observed Fire—II
- 20-21 (FA) Air Navigation (for Field Artillery pilots only)

30-Series

- 30-1 Administration—II
- 30-2 Training Management
- 30-3 Terrain Evaluation
- 30-4 Artillery Survey
- 30-5 Principles of Infantry Tactics—II
- 30-6 Hasty Field Fortifications and Obstacles
- 30-7 Troop Movements and Bivouac
- 30-8 Artillery Intelligence
- 30-9 AAA Tactics, General
- 30-10 (FA) Field Artillery Signal Communication
- 30-11 (FA) Fire Direction Procedure—I
- 30-12 (FA) Map and Aerial Photograph Reading for Field Artillery
- 30-13 (FA) Conduct of Observed Fire—III
- 30-14 (FA) Fire-direction Procedure—II
- 30-26 (FA) Field Artillery Meteorology (for Observation Battalion Officers only)
- 30-27 (FA) Meteorology for Light Aviation (for Field Artillery pilots only)

40-Series

- 40-1 Map and Aerial Photograph Reading—II
- 40-2 Rules of Land Warfare
- 40-3 Military Government
- 40-4 Combat Intelligence
- 40-5 Employment of Guided Missiles
- 40-6 Principles of Infantry Tactics—III
- 40-7 Staff Functions
- 40-8 Operation Orders
- 40-9 Supply in Combat
- 40-10 Field Artillery Tactics, General
- 40-11 RSOP
- 40-12 (FA) Self-Propelled Artillery
- 40-13 (FA) Field Artillery in Offensive Action
- 40-14 (FA) Field Artillery in Defensive Action
- 40-15 (FA) Employment of Light Aviation—Ground Units
- 40-24 (FA) Sound and Flash Ranging

50-Series

- 50-1 Division Artillery in Offensive Action

- 50-2 Division Artillery in Defensive Action
- 50-3 Corps and Army Artillery
- 50-4 Artillery with the Corps in Offensive Action
- 50-5 Artillery with the Corps in Defensive Action

Section II—Subcourses Required for Award of Certificate of Completion in AAA Subjects

20-Series

- 20-1 to 20-11 incl., plus:
- 20-15 (AAA) AAA Materiel—Guns
- 26-16 (AAA) AAA Materiel—Automatic Weapons
- 20-17 (AAA) AAA Basic Gunnery

30-Series

- 30-1 to 30-9 incl., plus:
- 30-15 (AAA) Electronics
- 30-16 (AAA) Employment of AAA Radar
- 30-17 (AAA) Fire Control—AAA Guns
- 30-18 (AAA) Advance Gunnery—AAA Guns
- 30-19 (AAA) Advance Gunnery—AAA Automatic Weapons

40-Series

- 40-1 to 40-11 incl., plus:
- 40-16 (AAA) AAA Gun Battalions
- 40-17 (AAA) AAA Automatic Weapons Battalion
- 40-18 (AAA) AAA in Ground Support
- 40-19 (AAA) AWS, AAIS, and AAOR

50-Series

- 50-6 (AAA) AAA Brigade, Group and their Staffs
- 57-7 (AAA) AAA With Division, Corps, and Army
- 50-8 (AAA) AAA Target practice and Analysis

Section III—Subcourses Required for Award of Certificate of Completion in SCA Subjects

20-Series

- 20-1 to 20-11 incl., plus:
- 20-18 (SC) Seacoast Artillery Materiel
- 20-19 (SC) SCA Fire Control and Position Finding Systems
- 20-20 (SC) SCA Gunnery—I

30-Series

- 30-1 to 30-9 incl., plus:
- 30-20 (SC) Employment of Seacoast Radar
- 30-21 (SC) Seacoast Artillery Communication
- 30-22 (SC) Orientation for Seacoast Artillery
- 30-23 (SC) Seacoast Artillery Gunnery—II
- 30-24 (SC) Preparation and Conduct of Fire
- 30-25 (SC) Elementary Tactics for SCA

40-Series

- 40-1 to 40-11 incl., plus:
- 40-18 (AAA) AAA in Ground Support
- 40-20 (SC) SCA Alternate Methods of Fire Control
- 40-21 (SC) Target Practice and Analysis
- 40-22 (SC) Tactics and Technique of Controlled Submarine Mines
- 40-23 (SC) Searchlights

50-Series

- 50-3 (FA) Corps and Army Artillery
- 50-9 (SC) The Harbor Defense Command
- 50-10 (SC) Operations of Command Posts and Operations Room
- 50-11 (SC) Tactics of Seacoast Artillery
- 50-12 (SC) Seacoast Artillery Gunnery

NOTICE OF ANNUAL MEETING, U. S. FIELD ARTILLERY ASSOCIATION

In compliance with Article VII, Section 1, of the Constitution, notice is hereby given that the Executive Council has fixed 5:30 P. M. Monday, December 15, 1947, as the time of the annual meeting of the Association to be held at the Army and Navy Club, 1627 Eye St., N. W., Washington, D. C.

The business to be disposed of will be the election of six members of the Executive Council (three Regular Army, two National Guard, and one Organized Reserve), and the transaction of such other business as may properly come before the meeting. Nominations may be made by proxy, or from the floor of the meeting.